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Technologies Enabling Customer Side Distributed
Resources at Scale

NASEO 2023 Energy Policy Outlook Conference

February 10, 2023



Today's Discussion

Technologies Enabling Customer Side Distributed Resources at Scale

Innovations in the distributed energy resource space give us the chance to engage with customers like never before. Smart grid-edge technologies allow us to drive energy efficiency and demand response programs that help customers better understand their energy usage and its impact on their communities. This session will focus on the growing need to engage with customers, the tools and programs that allow us do that, and the challenges and opportunities we face in gaining wider adoption.



Presenters

Moderator

Mark Glick

Chief Energy Officer

Hawaii State Energy Office



Presenter

Divakar "DJ" Jandhyala

Chief Product and
Technology Officer

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Agenda & Goals

- ✓ CLEARResult Introduction
- ✓ Technologies Role in Data and Grid Optimization
- ✓ IRA and Technology Adoption
- ✓ Discussion

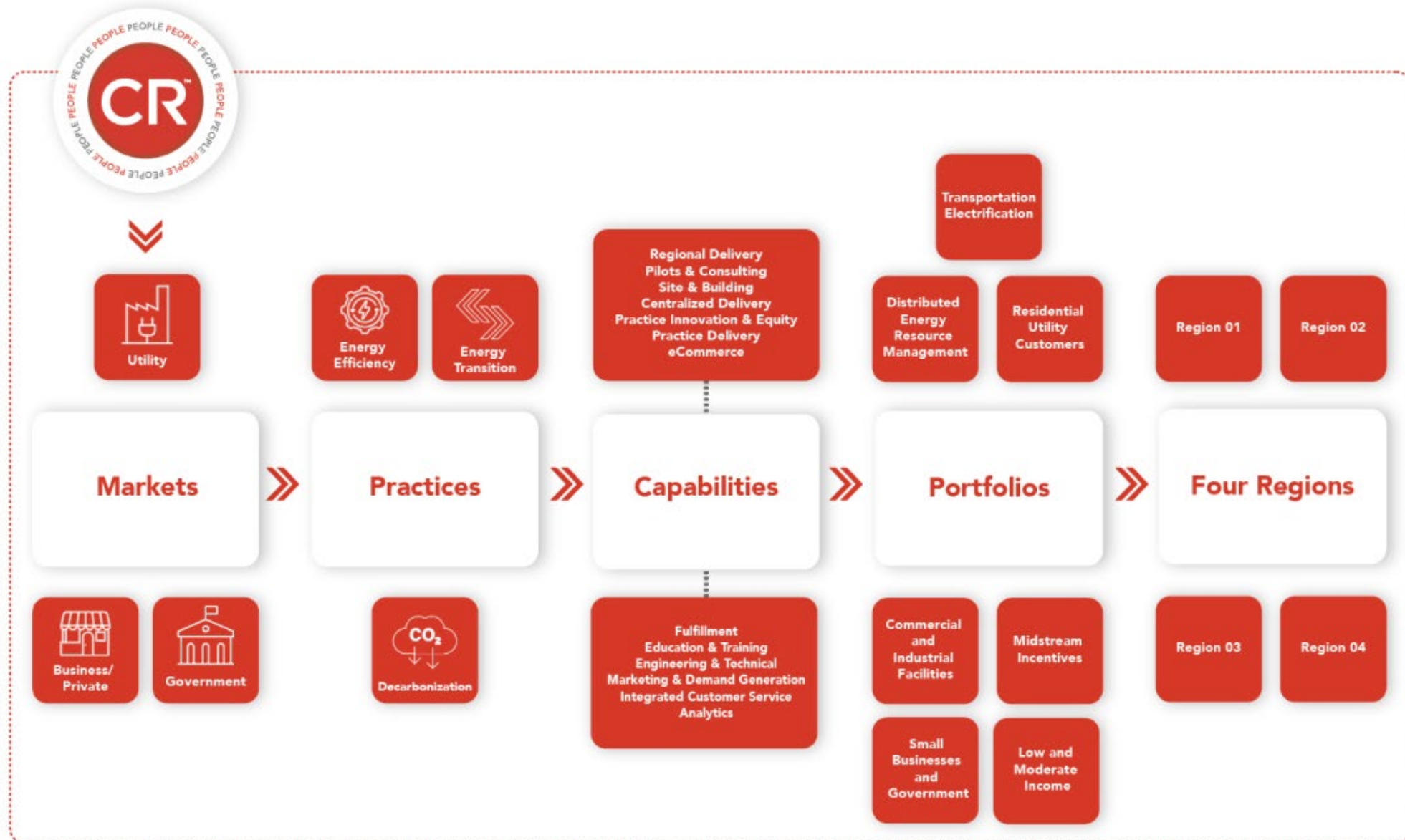
Key Takeaways

- *Connected Devices = Smart Energy Efficiency*
- *Technology Adoption Enables Grid Modernization*
- *IIJA and IRA Funding Helps the Transition Along*





CLEARResult Business Overview



Our collective lifetime impact* of 2022 program activity



\$7.6 BILLION

savings to customers
on energy bills



\$156 MILLION

savings to low income
customers on energy bills



18.1 MILLION

metric tons of CO₂
emissions averted

That's equivalent to



3.9 MILLION

passenger vehicles removed
from the road for a year



22.1 MILLION

acres of US forest
sequestering carbon



6.3 MILLION

homes' electricity
for a year

*Projected impact. Final impact to be reported April 2023.
"Lifetime impact" calculated with the full measure life included.



Technology evolution drives data and grid optimization



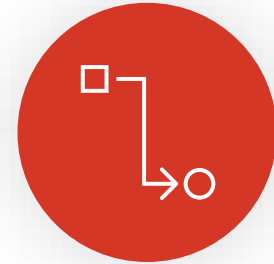
Utility Operations
want to incorporate
Demand Side
Management into
system operations
Win-Win-Win



Real Time capacity
management
essential to
operating DERs
Smart Energy
Efficiency



EE is evolving to
include more DERs
components
including
renewables, storage
and distribution
intelligence.



NEVI lays the
groundwork for a
more connected
/distributed grid
with EVs

Opportunity to
advance this
infrastructure with
IRA



Where Do Residential and C&I Consumers Meet Technology?

Technology brings customer benefit and convenience along with smart grid management and control

End Consumers (Residential and C&I) looking for:

- ✓ Savings
- ✓ Value
- ✓ Community Engagement
- ✓ Energy Equity

Tying Programs Together

- ✓ Move focus from the “Program” to the “Consumer”
- ✓ How does the Consumer Benefit?

Delivering EE and DR Holistically

- ✓ Single premise visits
- ✓ Renewables
- ✓ EV Charging
- ✓ Connected Devices





How Does Upcoming Funding Drive Consumer Engagement and the Energy Transition?

Both the IIJA and the IRA fund infrastructure projects that are smart grid capable – they need to be control ready!

Controllable load is a carbon-free resource that puts energy payments back with end customers

The IRA will make demands on the electrical grid more critical to manage – technology can do this if we plan now!

Representative IRA Funding Opportunities

GHG Reduction Fund	Allocates capital to deploy low- and zero-emissions technologies
High-Efficiency Electric Rebate Program	Funding for the implementation of EE rebate programs, specifically for LMI households
HOMES Rebate Program	Allocates funding to implement rebate programs involving whole-house retrofits
Advanced Industrial Facilities Deployment	Allocates funding toward reducing emissions in energy-intensive industries
Climate Pollution Grants	Provides grant funding for efforts to reduce air pollution
Environmental Justice Block Grants	Provides grant funding for decarbonization in low-income areas
Affordable Housing Efficiency Program	Provides funding to improve energy and water efficiency in low-income households

Coordinated federal, state, utility, and private sector resources will be required to ensure that the ongoing energy transition does not leave the most vulnerable behind



QUESTIONS AND DISCUSSION





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Together let's
change the way people
use energy